

Remarks

Claims 18-24 and 40-55 are in the application. Claims 40-46 are allowed. Reconsideration is requested.

Applicants acknowledge the Examiner's conclusion that claim 18 is generic, but that claims 47-55 are directed to non-elected species and are withdrawn from consideration. Applicants note that if claim 18 is held to be allowable, claims 47-55 would be entitled to consideration.

Claims 18-21 and 24 stand rejected under 35 U.S.C. 103(a) for obviousness over Furumiya (US Pat. No. 5,637,893) in view of applicants' admitted prior art. Claims 22 and 23 stand rejected under 35 U.S.C. 103(a) for obviousness over Furumiya in view of applicants' admitted prior art and Gross (US Pat. No. 5,734,293).

The Examiner states that Furumiya (Fig. 1B) discloses a method of transferring a charge from a charge accumulation layer to a transistor so as to substantially eliminate residual images. The Examiner notes that Furumiya does not disclose a transistor within the semiconductor substrate, but finds such a transistor in applicants' admitted prior art. The Examiner concludes that it would have been obvious to combine the transistor of the admitted prior art with the method of Furumiya to amplify the photoelectrically converted charge.

Each reference must be read as a whole to properly determine its teaching. It is improper to pick and choose individual features of a prior art reference without a teaching or suggestion to do so. Applicants submit that the rejection is improper and should be withdrawn because the cited combination of Furumiya and applicants' admitted prior art improperly picks and chooses features from the cited art without considering the references as a whole.

Furumiya is directed to simplifying the manufacture of an interline-transfer CCD with a miniaturized CCD image sensor. (Furumiya, col. 2, lines 61-64.) One aspect of Furumiya is to form a read-out gate area, such as region 26A in Fig. 6B, with a higher impurity concentration so the current path is formed closer

to the surface. (Furumiya, col. 4, lines 19-24 and col. 5, line 54 to col. 6, line 5.) Applicants submit that such a read-out region 26A with increased impurity concentration would lead one away from the subject matter of claim 18 and toward the structure of applicants' prior art Fig. 14.

Moreover, no part of Furumiya teaches or suggests a CCD image sensor that includes an amplifying transistor for receiving charge from a charge accumulation region. Rather, Furumiya includes multiple drawings, such as Figs. 1B, 2B, 6B, 7C, etc., which clearly show no amplifying transistor. If there were a suggestion to apply transistor amplification to the CCD structure of Furumiya, applicants submit that the suggestion would be to use the purportedly improved configuration of Furumiya Fig. 6B *et seq*, rather than the less desirable implementation of Fig. 1B. In this instance too, the references as a whole would lead one skilled in the art away from the combination proposed by the Examiner.

Applicants submit, therefore, that claim 18 and its dependent claims are patenably distinct from the cited references. Applicants request, therefore, that the rejection of claims 18-24 be withdrawn.

Applicants believe the application is in condition for allowance and respectfully request the same.

IPSOLON LLP  
805 SW BROADWAY #2740  
PORTLAND, OREGON 97205  
TEL. (503) 249-7066  
FAX (503) 249-7068

Respectfully Submitted,



Mark M. Meininger  
Registration No. 32,428